

A REVIEW OF THE GENUS *CRYPTOHELCASTIZUS*

(HYMENOPTERA: ICHNEUMONIDAE)

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The genus *Cryptohelcastizus* was described by Cushman (1919) with *C. rufigaster* (from California) as the type-species. In 1922, he synonymized *rufigaster* with *Cryptus alamedensis* Ashmead (1890). Viereck (1921) described *C. dichrous* from North Carolina. Cushman (1940) added two more species: *C. chrysobothridis* and *C. ornatus* from Oklahoma and California, respectively. Townes and Townes (1962) added six more species: *genalis*, *leiomerus*, *caudatus* and *maculosus* from California, and *fumipennis* and *nigricans* from Arizona. Thus a total of ten species are at present known under the genus, all from the U. S. A., in the Nearctic Region.

In the Townes Collection there were a number of unstudied specimens from Northwestern United States, which prompted me to make a restudy of the genus. All the types were kindly loaned to me by the curators of the various museums. No new species turned up in the collections, but a new subspecies of *C. genalis* is described from Oregon. New distributional records are given for the various species, and a key is provided to distinguish them. In the treatment that follows, only the significant characters of the species are mentioned, and the records of specimens studied. For fuller descriptions refer to Townes and Townes (1962). Synonymical references to the species can be seen in the catalogues of Townes (1944), Townes and Townes (1951) and Carlson (1979).

The genus *Cryptohelcastizus* has been traditionally put under the old subfamily Cryptinae close to *Helcastizus* Foerster and *Xylophrurus* Foerster. Townes and Townes (1962) placed it under the subtribe Echthrina of tribe Mesostenini, subfamily Gelinae. In 1970, Townes changed the name of the subtribe to Gabuniina. With the raising of the tribe Mesostenini to subfamily Mesosteninae by Gupta (1970), the Gabuniina becomes the tribe Gabuniini.

Genus *CRYPTOHELCASTIZUS* Cushman (fig. 1)

Cryptohelcastizus Cushman, 1919. Proc. U. S. Natl. Mus., 55: 534.

Type-species: (*Cryptohelcastizus rufigaster* Cushman) = *alamedensis* (Ashmead); original designation.

Taxonomy: Townes and Townes, 1962: 504. Carlson, 1979: 478.

The salient features of the genus are: Head transverse. Clypeus short, convex, its apical margin broadly truncate, without a median tooth. Sternaulus absent. Pleural carina and apical transverse carina of propodeum absent. Propodeum usually short and rugoso-punctate. Basal transverse carina always present. Areolet pentagonal, large, 0.5 to 0.9 as high as second recurrent

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vein. Nervulus basad of basal vein. Nervellus intercepted below its middle. Fore femur in female concave below. First tergite without a lateral triangular tooth at base, its dorsolateral carina weak or absent, ventrolateral carina present. Ovipositor 0.5 to 1.0 the fore wing length.

Distribution: Nearctic Region.

Host: Buprestid larvae boring in branches and twigs of trees and shrubs.

Two species groups can be recognized based on the nature of the basal transverse carina of the propodeum and the coloration of the wings:

I. *The Alamedensis Group*, characterized by having the wings clear hyaline, and the basal transverse carina of propodeum complete, uniformly arched or sometimes narrowly interrupted medially, but never turned basad medially. This group includes *C. alamedensis*, *nigricans*, *maculosus*, *ornatus*, *caudatus*, and *chrysobothridis*.

II. *The Dichrous Group*, characterized by having the wings black or strongly infuscate, and basal transverse carina of propodeum interrupted medially and each end turned basad. This group includes *C. dichrous*, *genalis*, *fumipennis*, and *leiomerus*.

KEY TO THE SPECIES OF *CRYPTOHELCOSTIZUS*

1. Wings clear hyaline. Basal transverse carina of propodeum complete, uniformly arched or sometimes narrowly interrupted medially, but never turned basad in the middle (*Alamedensis Group*). 2
 Wings black or strongly infuscate. Basal transverse carina of propodeum interrupted medially and its ends turned basad medially (*Dichrous Group*). 7
2. Hind femur on its front side with very sparse hairs, their sockets separated by more than 2.0 the length of hairs. 3
 Hind femur on its front side with closely set hairs, their sockets separated by 0.7 to 2.0 x the length of hairs. 6
3. Hind femur polished, black. Nervulus basad of basal vein by 0.5 to 0.66 its length (by more than half its length). Propodeum dorsally flat, not very convex. Trochanters of fore leg black ventrally.
 2. *nigricans* Townes and Townes (p. 4)
 Hind femur granulose, subpolished. Nervulus basad of basal vein by less than half its length. Propodeum dorsally convex, sloping. Trochanters of fore leg with white marks ventrally. 4
4. Basal transverse carina of propodeum complete and uniformly arched. Propodeum and hind coxa black, without any spot or mark.
 1. *alamedensis* (Ashmead) (p. 4)
 Basal transverse carina of propodeum narrowly interrupted medially with the ends not turned basad medially. Propodeum and hind coxa with yellow marks. 5
5. Mesopleurum and metapleurum each with a large yellow mark. Vertex deeply and closely punctate. Second intercubitus weak medially.
 3. *maculosus* Townes and Townes (p. 5)

Mesopleurum and metapleurum without any yellow marks. Vertex with sparse, moderate sized punctures. Second intercubitus uniformly strong. (Ovipositor sheath 0.4 the length of front wing.)

4. ornatus Cushman (p. 5)

6. Propodeum and hind coxa marked with white. Ovipositor sheath 0.75 the length of front wing. Legs lighter in color.

5. caudatus Townes and Townes (p. 6)

Propodeum and hind coxa black, without any white marks. Ovipositor sheath 0.4 the length of front wing. Legs darker in color.

6. chrysobothridis Cushman (p. 6)

7. Hairs on front face of hind femur moderately dense, their sockets separated by about 0.7 the length of the hairs. Punctures on mesopleurum separated by about 0.7 their diameter. Prepectal carina reaching subtegular ridge. Face granulose, with punctures on sides and rugulose medially. Pronotal collar black without any central white or brown mark. 7. dichrous Viereck (p. 7)

Hairs on front face of hind femur sparser, their sockets separated by 2.0 the length of the hairs. Punctures on mesopleurum separated by about 0.4 their diameter. Face shiny with punctures or with a few oblique striations. Pronotal collar with a white or brown mark medially (except in *leiomerus*). Prepectal carina usually reaching 0.6 to 0.75 the height of mesopleurum. 8

8. Hind margin of temple, and its occipital carina, strongly bulging outward at the lower corner of the eye. Face strongly punctate. Vertex moderately closely punctate close to ocelli.

8. genalis Townes and Townes 9

Hind margin of temple, and its occipital carina, not bulging outward, sometimes a little convex. Side of face punctate. Vertex sparsely punctate close to ocelli. 10

9. Hind femur reddish-brown. Coxa brownish-black. Propodeum ruguloso-punctate. First tergite shiny and grooved subapically.

8a. genalis genalis Townes and Townes (p. 7)

Hind coxa and femur black. Propodeum punctato-striate. First tergite punctate and not grooved. . 8b. genalis niger, new subspecies (p. 8)

10. First tergite sparsely and finely punctate. Clypeus and upper part of pronotum marked with white. Temple weakly convex. Second abscissa of cubitus about 1.4 as long as the third abscissa.

9. leiomerus Townes and Townes (p. 8)

First tergite moderately punctate dorsally. Clypeus and upper part of propodeum marked with white. Temple moderately convex. Second abscissa of cubitus about 1.15 as long as the third abscissa.

10. fumipennis Townes and Townes (p. 9)

I. THE ALAMEDENSIS GROUP

1. CRYPTOHELCOSTIZUS ALAMEDENSIS (Ashmead)

Cryptus alamedensis Ashmead, 1890. Proc. U. S. Natl. Mus., 12: 409.

♀. Type: ♀, Alameda, California (Washington).

Cryptohelcostizus rufigaster Cushman, 1919. Proc. U. S. Natl. Mus., 55: 534. ♂, ♀. Type: ♀, Harold, California (Washington).

The characteristic features of this species are: Mesopleurum with fine rugosities. Propodeum dorsally convex and sloping. Basal transverse carina of propodeum complete and evenly arched. Nervulus basad of basal vein by less than 0.5 its length. Hind femur granulose with very sparse hairs. Ovipositor 0.9 as long as fore wing. Ovipositor sheath about 0.65 as long as fore wing.

Black with reddish abdomen. A mark on clypeus, base of mandible, a mark on pronotum, a narrow interrupted orbital mark and metascutellum, white. Propodeum black, sometimes with two very small marks on apical area. Wings hyaline. Legs brownish. First trochanter of fore leg white ventrally. Hind coxa black. Basal 0.5 of first abdominal tergite brownish-black.

Specimens: 61♀, 26♂. U. S. A.: *California*: Leevining, 4♂, June 22, 1948. Portero in San Diego Co., 11♀, 5♂, April 8-17, 1974. Lake Wohford, San Diego Co., 11♀, 1♂, April 21-May 1, 1974. Julian, 24♀, 10♂, May 6-30, 1974. North of Leggett, 1♀, May 18, 1978 (All above collected by H. and M. Townes and in Townes Collection.). *California*: Simla Station, ♂, June 28, 1922, R. D. Hartman, on Apricot, parasitic on *Chrysobothris mali*. Los Gatos, 1♀, May 23, 1918, R. D. Hartman, on *Osmaronia*, parasitic on *Chrysobothris mali*. Walter Sqr., Napa Co., 1♀, May 26, 1951, E. I. Schlinger (Townes). Elk Grove, Sacramento Co., 1♀, Sept. 24, 1949, H. A. Hunt (Townes). W. Walker R., 6000 ft., ♀, C. D. Michner, on *Prunus* (Townes). Idaho: near Stanley, 6000 ft., ♀, Aug. 8, 1978 (Townes). Lowman, 6000 ft., ♀, April 14, 1978, H. & M. Townes (Townes). *Nevada*: Tuscarora, ♂, June 5, 1978, H. & M. Townes (Townes). *Oregon*: Selma, 2♀, 3♂, May 20-21, 1974, H. & M. Townes (Townes). Hyatt Reservoir, 3♀, May 2, 20, and 22, 1974, H. & M. Townes (Townes). Pinehurst, 3♀, June 23 and 29, 1974, H. & M. Townes (Townes). *Utah*: Strawberry Daniel Pass, ♀, June 19, 1948, H., M., G. & D. Townes (Townes).

Variations: Two females from California: Poterero, April 8, 14, 1974 are lighter in color with body thin and slender. Other specimens also show considerable variations in the punctation of face, interocellar area, and mesopleurum, color of legs and base of abdomen, and the length of ovipositor sheath as compared to the fore wing length.

Distribution: Townes and Townes (1962) reported this species from British Columbia, California (widely distributed), Oregon, Texas and Utah. It is here reported from Idaho and Nevada for the first time.

Hosts: *Chrysobothris mali*, *Myrmex arizonicus*, *Argilus angelicus*.

2. CRYPTOHELCOSTIZUS NIGRICANS Townes and Townes

Cryptohelcostizus nigricans Townes and Townes, 1962. U. S. Natl. Mus.

Bull. 216(3): 508. ♂, ♀. Type: ♀, Arizona: Sierra Ancha, Parker Creek (Townes). Examined, 1980.

Some of the salient features of this species are: Mesopleurum punctate,

without striations or rugosities, but punctures close and deep. Propodeum dorsally flat. Basal transverse carina of propodeum complete and evenly arched. Nervulus basad of basal vein by 0.5 to 0.66 its length. Hind femur polished and with very sparse hairs. Ovipositor about 0.7 as long as fore wing. Ovipositor sheath about 0.45 as long as fore wing.

Black with reddish abdomen. Clypeus, base of mandible, and pronotum each with a small white mark. Metascutellum and propodeum wholly black. Wings hyaline. Legs black. First trochanter of fore leg without any white mark. Apical two tarsal segments of hind leg brownish. First tergite black.

Specimens: 1♂, 2♀. *Arizona*: Sierra Ancha, Parker Creek, ♀ (type), May 7, 1947, H. & M. Townes (Townes). Workman Creek, ♂, ♀ (paratypes), April 28, 1947, H. & M. Townes (Townes).

Distribution: U. S. A.: Arizona.

3. *CRYPTOHELCASTIZUS MACULOSUS* Townes & Townes

Cryptohelcostizus maculosus Townes and Townes, 1962. U. S. Natl. Mus. Bull., 216(3): 512. ♀. Type: ♀, California: Death Valley (Washington). Reared from *Prosopis*. Examined, 1980.

The salient features of this species are: Mesopleurum closely and deeply punctate with a few rugosities medially. Propodeum convex and sloping. Basal transverse carina of propodeum interrupted medially, but its ends not turned basad. Nervulus basad of basal vein by less than 0.5 its length. Hind femur granulose with very sparse hairs. Ovipositor sheath about 0.5 as long as fore wing.

Black, marked with yellow. Abdomen reddish-brown with whitish marks. Face, clypeus, labrum, base of mandible, complete orbital stripe, temple, pronotal collar, pronotum broadly above, a Y-shaped mark on middle lobe of mesoscutum a crescentic mark on lateral lobe of mesoscutum, scutellum, metascutellum, tegula, subtegular ridge, a broad oblong mark on mesopleurum, metapleurum dorsally, a mark behind hind wing and propodeum apically, yellow. Wings hyaline. Legs reddish-brown. Coxae black, dorsally marked with white. First trochanter of fore leg ventrally white. First tergite basally brownish and apically marked with white.

Specimen: California: Death Valley, ♀ (type), Sept. 3, 1957, R. C. Hall, "Reared from *Prosopis*" (Washington).

Distribution: U. S. A.: California.

4. *CRYPTOHELCASTIZUS ORNATUS* Cushman

Cryptohelcostizus ornatus Cushman, 1940. Proc. U. S. Natl. Mus. 88: 359. ♀. Type: ♀, Death Valley, California (Washington). Examined, 1980.

The salient features of this species are: Mesopleurum closely and deeply punctate. Propodeum convex. Basal transverse carina of propodeum interrupted medially but ends not turning basad. Nervulus basad of basal vein by less than 0.5 its length. Hind femur granulose with very sparse hairs. Ovipositor 0.6 the length of fore wing, its sheath 0.4 the length of fore wing.

Black with yellow marks. Abdomen reddish-brown. Face black. Clypeus base of mandible, broad complete orbital stripes, an interrupted mark on pronotal collar, upper part of pronotum, scutellum, metascutellum, tegula,

and subtegular ridge, yellow. Propodeum with two small white marks on either side and a small mark basad of them. Wings hyaline. Legs reddish-brown. Fore coxa dorsally and ventrally, and first trochanter ventrally white. Middle coxa dorsolaterally and trochanter ventrally white. Hind coxa dorsally white marked. Basal 0.7 of first tergite black.

Specimens: ♀, ♂. *Arizona*: Sahuarito, ♂, April 11, 1947, H. & M. Townes (Townes). *California*: Death Valley, ♀ (type) Feb. 23, 1939, M. F. Gilman, reared from *Chrysobothris deserta* in desert holly (Washington).

Distribution: U. S. A.: Arizona, California.

Host: *Chrysobothris deserta*.

5. CRYPTOHELCOSTIZUS CAUDATUS Townes and Townes

Cryptohelcostizus caudatus Townes and Townes, 1962, U. S. Natl. Mus. Bull., 216(3): 511. ♀. Type: California: Lake Tahoe (Davis). Examined, 1980.

The characteristic features of this species are: Mesopleurum moderately closely punctate, punctures arranged in transverse rows or forming fine rugosities at places. Basal transverse carina of propodeum complete and evenly arched. Hind femur with closely set hairs. Ovipositor as long as the fore wing. Ovipositor sheath 0.75 as long as fore wing.

Black with reddish abdomen. Clypeus except its apical margin, base of mandible, interrupted orbital ring, temple towards lower corner of eye, upper margin of pronotum, two lateral marks on scutellum (meeting at apex), metascutellum, tegula, subtegular ridge, and two sublateral marks on apical slope of propodeum, whitish-yellow. Wings hyaline. Legs reddish-brown. All coxae black with white dorsal marks. First trochanter of fore and middle legs ventrally white marked. First tergite basally black.

Specimens: 2♀. *California*: Lake Tahoe, ♀ (type), Aug. 15, 1950, R. M. Bohart (Davis). *Oregon*: Pinehurst, ♀, July 2, 1978, H. & M. Townes (Townes).

Variation: The color of mesosternum in the specimen from Oregon is somewhat lighter than that in the type. Otherwise it agrees with the same.

Distribution: U. S. A.: California, Oregon.

6. CRYPTOHELCOSTIZUS CHRYSOBOTHRIDIS Cushman

Cryptohelcostizus chrysobothridis Cushman, 1940. Proc. U. S. Natl. Mus., 88: 358. ♂, ♀. Type: ♀, Stillwater, Oklahoma (Washington). Paratype examined, 1980.

This species is characterized as: Mesopleurum with fine trans-rugosities. Propodeum a little flat. Basal transverse carina of propodeum complete and evenly arched. Hairs on front face of hind femur close together. Ovipositor 0.6 as long as fore wing. Ovipositor sheath 0.4 as long as fore wing.

Black. Abdomen reddish-brown. A mark on clypeus, a mark on pronotum and an interrupted narrow orbital stripe, white. Metascutellum brownish. Propodeum wholly black. Wings hyaline. Legs brownish, with all coxae blackish. First trochanter of fore leg ventrally not marked with yellow. Third and fourth tarsal segments of hind leg white. In male middle and hind femora reddish-brown.

Specimen: Oklahoma: Stillwater, ♀ (paratype), April 4, 1936, Myron

Maxwell (Townes).

Host: Chrysobothris sp. in *Malus pumila*.

Distribution: U. S. A.: Oklahoma.

II. THE DICHROUS GROUP

7. CRYPTOHELCASTIZUS DICHROUS Viereck

Cryptohelcastizus dichrous Viereck, 1921. *Psyche*, 28: 73. ♂, ♀.

Type: ♀, Southern Pines, N. C. (Cambridge).

This species is characterized by: Face granulose with punctures. Punctures below antennal sockets obliquely striate. Hind margin of temple and its occipital carina not bulged out at the lower margin of eye. Punctures on mesopleurum deep and well separated. Prepectal carina reaching subtegular ridge. Basal transverse carina of propodeum interrupted medially and turned basad. Hind femur granulose with moderately dense hairs. Ovipositor 0.45 as long as fore wing, shorter than in *fumipennis* and *leiomerus*. Ovipositor sheath about 0.35 as long as fore wing.

Black, abdomen reddish-brown. Orbital ring interrupted and white. Pronotum without any yellow mark. Wings black to strongly infumated. Legs black. In male hind femur red.

Specimens: 4♀. *North Carolina:* Lumberton, ♀, Oct. 27, 1949, Rabb and Townes. Council, ♀, May 16, 1940, D. L. Wray. Page Lake, ♀, Oct. 27, 1949, Rabb and Townes. Southern Pines, ♀, Oct. 1955, H. Townes (all in Townes collection).

Distribution: Townes and Townes reported it from Georgia, Missouri, New Jersey, North Carolina, Texas and Virginia.

8. CRYPTOHELCASTIZUS GENALIS Townes and Townes

Female: Face shiny, punctate; punctures arranged in oblique striations just below the antennal sockets. Vertex close to ocelli moderately closely punctate. Hind margin of temple and its occipital carina strongly bulged outwards at the level of lower corner of the eye. Mesopleural punctures deep and separated by 0.4 their diameter. Prepectal carina reaching 0.6 the height of mesopleurum. Propodeum basad of basal carina rugoso-punctate; centrally punctato-striate to punctato-rugose. Basal transverse carina of propodeum interrupted medially and its ends turned basad. Hairs on front face of hind femur sparse. First abdominal tergite subapically grooved or not so; groove punctate or impunctate. Ovipositor 0.5 as long as fore wing.

Black. Abdomen reddish-brown. Face black. A mark on clypeus, a small mark on upper part of pronotum, a narrow interrupted orbital ring, and a mark on pronotal collar, white. Wings infusate. Coxa and trochanters brownish-black. Legs reddish-brown. Hind tibia and tarsus brownish.

Two subspecies are recognized: *C. genalis genalis* Townes and Townes from California and *C. genalis niger*, n. subsp. from Oregon.

8a. CRYPTOHELCASTIZUS GENALIS GENALIS Townes and Townes

Cryptohelcastizus genalis Townes and Townes, 1962. U. S. Natl. Mus. Bull., 216(3): 507. ♀. key, des. Type: ♀, California (Davis).

Female: Propodeum centrally rugoso-punctate. First abdominal tergite subapically longitudinally grooved, groove shiny, impunctate.

Hind coxa brownish-black. Hind femur reddish-brown.

Specimen: California: Mendocino, Capella, ♀ (type), May 20, 1955, E. I. Schlinger (Davis).

Distribution: U. S. A.: California.

8b. CRYPTOHELCOSTIZUS GENALIS NIGER, n. subsp.

Female: Face deeply and densely punctate, below antennal sockets punctures sometimes appear semicircularly arranged. Malar space 0.75 the basal width of mandible. Temple shiny with a few fine punctures, its hind margin and occipital carina strongly bulged outwards at the lower corner of the eye. Frons rugoso-striate. Vertex closely and deeply punctate with a few trans-striae in the groove. Pronotal collar finely and closely punctate. Mesoscutum deeply and closely punctate. Notaulus broad, with trans-striae. Scutellum closely and deeply punctate, but punctures a little sparse in the middle. Metascutellum shiny. Mesopleurum with moderately close and deep punctures. Prepectal carina reaching 0.7 the height of mesopleurum. Metapleurum punctato-striate. Basal transverse carina of propodeum interrupted medially and its ends turned basad. Area basad of basal carina punctate submedially and with a few trans-striations. Basolateral area of propodeum densely and deeply punctate, central area punctato-striate, petiolar area rugose. Nervulus basad of basal vein by less than 0.5 its length. Nervellus intercepted below the middle. Hind coxa punctate. Hind femur with sparse hairs. First tergite stout, closely and finely punctate. First sternite reaching up to spiracle. Dorsolateral carina absent. Ventrolateral carina present and stout at base. Second and following tergites weakly punctate to mat. Ovipositor 0.5 as long as fore wing.

Black. Abdomen reddish-brown. Pronotal collar without white mark. Small rounding mark on clypeus, and upper edge of pronotum, and a thin broken orbital ring, white. Wings infusate. Legs black, except the second trochanter of each leg, which is reddish.

Male: Similar to the female in structure, but legs brownish-black and first abdominal tergite a little darker in color. Wings not as dark as those of females.

Length: ♀, 16 mm. Fore wing 11 mm. Ovipositor 6 mm. ♂, 13 mm. Fore wing 8 mm.

Holotype: ♀, Oregon: Selma, May 28, 1978, H. & M. Townes (Townes).

Allotype: ♂, Oregon: Selma, May 20, 1978, H. & M. Townes (Townes).

Paratypes: 1♀, 2♂. Oregon: Pinehurst, ♀, June 29, 1978, H. & M. Townes; 2♂, same locality, dates, and collector as allotype (Townes).

Distribution: U. S. A.: Oregon.

9. CRYPTOHELCOSTIZUS LEIOMERUS Townes and Townes

Cryptohelcostizus leiomerus Townes and Townes, 1962. U. S. Natl. Mus. Bull., 216(3): 506. ♀. key, des. Type: ♀, California (Berkeley).

The characteristic features of this species are: Face punctate, punctures a little sparse and not forming striations. Hind margin of temple and its occipital carina not bulged outward at the level of lower corner of eye. Vertex sparsely punctate as compared to *genalis*. Punctures on mesopleurum close

and forming trans-striations. Prepectal carina reaching 0.7 the height of mesopleurum. Basal transverse carina of propodeum interrupted medially and turned basad. Second abscissa of cubitus about 1.4 as long as the third abscissa. Hairs on front face of hind femur sparse. First abdominal tergite sparsely punctate. Ovipositor 0.6 as long as fore wing.

Black. Abdomen reddish-brown. Orbits narrowly white. Wings infusate. Legs brownish-black.

Specimen: California: Los Angeles, Tanbark Flats, ♀ (type), June 14, 1952, W. V. Garner (Berkeley).

Distribution: U. S. A.: California.

10. *CRYPTOHELCASTIZUS FUMIPENNIS* Townes and Townes

Cryptohelcostizus fumipennis Townes and Townes, 1962. U. S. Natl. Mus. Bull., 216(3): 507. ♀. key, des. Type: ♀, Arizona (Washington).

This species can be recognized as follows: Face shiny, with distinct punctures. Hind margin of temple and its occipital carina faintly bulged outward. Vertex sparsely punctate as compared to *genalis*. Punctures on mesopleurum close and deep. Prepectal carina reaching 0.6 the height of mesopleurum. Propodeum rugoso-striate, its basal transverse carina interrupted medially and the ends turned basad. Second abscissa of cubitus about 1.1 as long as third abscissa. Hairs on front face of hind femur sparse. First tergite closely punctate (sparsely punctate in leiomerus). Ovipositor 0.6 as long as fore wing.

Black. Abdomen reddish-brown. Clypeus except its apical margin, a mark at the base of mandible, interrupted orbital ring, upper edge of pronotum, pronotal collar medially, and tegula, white. Wings infusate. Legs brownish-black (including femur). Fore and middle legs a little lighter.

Specimen: Arizona: Sabino Canyon, "Resting on blossom", ♀ (type), Nov. 24, 1917, W. D. Edmonston (Washington).

Distribution: U. S. A.: Arizona.

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(after Townes & Townes)

Fig. 1 CRYPTOHELCOSTIZUS alamedensis

